
WATERLINES

News affecting the management and use of Indiana's water resources

DIVISION OF WATER
INDIANA DEPARTMENT OF NATURAL RESOURCES
SPRING/SUMMER 2004

HERE WE GO AGAIN

While some folks are still trying to recover from the floods that Indiana experienced in 2003, tornadoes and flooding in 2004 triggered yet another Presidential Disaster Declaration.

Beginning on the afternoon of May 25, severe thunderstorms raced across portions of Indiana causing flash flooding and tornadoes. Additional flash flooding and tornadoes occurred on May 29 throughout the state. Among the hardest hit was the town of Marengo. An F-3 tornado devastated the small Crawford County town. In the early evening of May 29, a residential area of the City of Peru in Miami County was also struck with an F-3 tornado. Several homes were heavily damaged and some homes were destroyed, including an apartment building.

A portion of Marion County experienced an F-2 tornado, resulting in damage to 700 homes. Additional tornado touchdowns damaged homes and commercial property throughout the central and southern portions of Indiana. More storms and heavy rains hit hard in June, causing flooding and additional damage in many areas of the state. There were three fatalities as a result of the May/June storms.

Sixty-nine Indiana counties were included in the declaration as a result of the damages that occurred



from May 25 through June 25. As of July 30, Indiana had received nearly \$20 million in disaster recovery aid. Of that amount, over \$4.2 million was disbursed to victims through the Individuals and Households Program, and the Small Business Administration (SBA) approved more than \$14.9 million in loans for homeowners and businesses. These figures will likely rise, as the deadline for registering with FEMA for disaster assistance under this declaration was August 2. ≈

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DIGITAL FLOODPLAIN DATA NOW AVAILABLE

The Division of Water has just completed a project to convert a majority of the Flood Insurance Rate Maps (FIRMs) to digital GIS coverages. In conjunction with Prison Enterprises Network (PEN), the Division converted floodplain information for 80 counties to digital form. The majority of the floodplain information was taken from the FEMA FIRM maps. Studies by the Division of Water and the Corps of Engineers were also included. The floodplain information was adjusted to match the USGS digital orthophotos at a scale of 1:12,000. Gaps where the floodplain crosses town boundaries have been corrected, and the data is presented in a countywide format. These files are in FEMA's "DFIRM" (Digital FIRM) format, although they are not fully attributed. Other coverages have also been created from other sources, such as transportation (from INDOT), hydrography (from USGS), public land survey system information (from IGS), and county boundaries and city / town jurisdictional limits (from Census data).

These files are available for download from the Division's Web site at <http://www.in.gov/dnr/>

[water/surface_water/hydro_hydraulic/flood_maps/index.html](#). Viewing this data requires a GIS software package, such as ESRI's ArcView. A free version of ESRI software (ArcReader) is available from ESRI's Web site at www.esri.com.

The Division has recently received a series of grants from FEMA to begin the process of converting this data into recognized DFIRMs. The Division plans to coordinate these conversions over a 5-year period starting with Federal Fiscal Year 2004. Details of the plan, The Indiana Floodplain Mapping Initiative, can be downloaded from the Division's Web site. In the process of converting this data into FEMA accepted DFIRMs, the Division will be involving the various local community and county officials in critiquing the maps, restudying critical areas, and meshing the floodplain data into any local GIS that may be available. Staff will meet this fall with the counties that are targeted for revision in Federal Fiscal Year 2005.

If you have any questions or comments regarding these maps, please contact David Knipe at dknipe@dnr.IN.gov, or at (317) 232-4160, or toll free at (877) 928-3755. ☺



Figure 1: Original FEMA FIRM, raster image, not georeferenced



Figure 2: Digital FIRM (with DOQ background), vector GIS file, georeferenced

NEW FEMA FACE



Larry Sanders, Natural Hazards Program Specialist with the Federal Emergency Management Agency (FEMA), was recently assigned to the

State of Indiana. He works in the FEMA Region V office located in Chicago. Larry has worked in various roles with FEMA since 1979. In his new assignment, Larry works directly with the Division of Water's Floodplain Management Section staff and is available to assist Indiana officials in floodplain management issues and the National Flood Insurance Program. You can contact him at larry.sanders@dhs.gov. ☸

FLOODSMART

You may have noticed some new television ads recently that are geared to educate homeowners and renters about the hazard of flooding. These television spots, broadcast on some cable channels, are a part of the National Flood Insurance Program's new consumer campaign, FloodSmart. In addition to television, the campaign includes a new Web site, a toll-free consumer telephone hotline, direct mail, and a public education initiative through the insurance industry, Realtors®, and lenders. The new Web site, <http://www.FloodSmart.gov>, provides information on preparing homes for flooding, tools for assessing flood risk and the cost of flood insurance premiums, a listing of local insurance agents, and links to other resources. Check it out! ☸



FLOODSMART.GOV

An official site of the National Flood Insurance Program

CONFERENCE CORNER

The 8th Annual Indiana Association for Floodplain and Stormwater Management Conference will be held October 13-15, 2004. This year's conference will be located at the Potawatami Inn in beautiful Pokagon State Park near Angola, Indiana.

This conference will offer floodplain management and stormwater design information for all levels of practitioners in both the public and private sectors — with “classroom” basics, premier project examples, and current State and Federal rules and regulations, Phase 2, Rule 5, drainage law, retention ponds, and more. Professionals from the Department of Natural Resources, Department of Environmental Management, State Emergency Management Agency, Federal Emergency Management Agency, and the private consulting sector will provide practical advice, tools for local floodplain management, technological advances in mapping, and industry resources.

The Certified Floodplain Manager (CFM) exam will again be offered during the conference. Those wishing to take the exam at this year's conference, please note that you must apply to the Association of State Floodplain Managers (ASFPM) prior to the conference. Information on certification and application forms can be obtained from the ASFPM Web site at www.floods.org, by e-mail at asfpm@floods.org, or by calling 608-274-0123. Current CFMs will qualify for Continuing Education Credits (CECs) by attending the conference.

For the most current information on the conference, visit the INAFSM Web site at www.inafsm.net or contact Marta Moody, Conference Chair, by calling 765-747-7740, or by e-mail at mmoody@co.delaware.in.us. ☸

“NO NEED” FOR FLOOD INSURANCE

You don't have to live next to a river, lake, or ocean to be at risk of flooding. The National Flood Insurance Program regularly pays claims for flooding caused by such events as unusually rapid springtime snowmelt, backup of storm sewers during heavy rainfall, or failure of a distant levee or dam.

In areas at high risk of flooding, there is a 26-percent chance of being flooded during the life of a typical 30-year residential mortgage.

Federal law, in some instances, requires flood insurance. To get federally secured financing to buy, refinance, build, repair, reconstruct, or improve buildings in areas at high risk of flooding, the homeowner may be required to purchase flood insurance.

Between 20 and 25 percent of all National Flood Insurance Program claims occur in areas at medium or low risk of flooding.

The owner of a residence in a one- to four-family residential building located in a Regular Program community and an area at medium or low risk of flooding can buy a Preferred Risk Policy (PRP) with basic building and contents coverage for an annual premium as little as \$111. Ask your insurance agent or company whether your residence is eligible for the PRP.

A typical residential building in an area at high risk of flooding is six times more likely to be damaged by flood than by fire.

Federal disaster assistance might pay for some flood damage – but there's a costly catch. Disaster assistance, when authorized, usually takes the form of loans, which must be repaid with interest. The annual interest on an average federal disaster loan is greater than the annual premium (about \$395) for an average National Flood Insurance Program policy. ~

Reprint of article from Watermark 2004, Number 1

NFIP REAUTHORIZATION AND REPETITIVE LOSS BILL SIGNED INTO LAW

On June 30, 2004, the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (S.2238) was signed into law. The Act reauthorizes the National Flood Insurance Program (NFIP) through September 30, 2008. However, as the name given to the act implies, reforms were made, including measures that will help policyholders who have experienced repetitive flood damage.

Congress acknowledged the repetitive loss properties problem, particularly those that have experienced either two or three losses that cumulatively exceed the building's value. Repetitive-loss properties have been a significant drain on the resources of the National Flood Insurance Program, costing about \$200,000,000 annually. Repetitive-loss properties comprise approximately one percent of currently insured properties but are expected to account for twenty-five to thirty percent of claims losses.

A five-year pilot program was created that will direct mitigation efforts toward “severe repetitive loss properties.” “Severe repetitive loss properties” are defined as NFIP-insured single-family properties (1-4 family) that meet one of two criteria:

- four or more flood insurance claims of at least \$5,000, and with the cumulative amount of such claims payments exceeding \$20,000; or,
- at least two flood insurance claims with the cumulative amount exceeding the value of the property

FEMA shall, by regulations, define severe repetitive loss for multifamily properties (five or more dwelling units). Nonresidential properties are not included in the definition. The intent of the pilot program is to help people who have experienced severe repetitive flood damage through financial assistance from the NFIP.

Acquisition, elevation, relocation, and demolition are typical mitigation activities. States and communities shall consult, to the extent practicable, with the owners of severe repetitive loss properties in determining which eligible activities to undertake. Should an owner of a severe repetitive loss property refuse an offer made under the pilot program, he or she may be faced with higher flood insurance premiums.

Mitigation of repetitive-loss properties through buyouts, elevations, relocations, or flood proofing will produce savings for policyholders under the program and for Federal taxpayers through reduced flood insurance losses and reduced Federal disaster assistance. Communities and property owners that choose to voluntarily participate in a mitigation and buy-out program will maximize the benefits of such a program, while minimizing any adverse impact on communities and property owners.



NFIP insurance coverage, Increased Cost of Compliance (ICC), was also modified by this Act. Particularly important is the change allowing ICC coverage to be triggered by the

definition of “substantial damage” set out in the community’s floodplain ordinance. This will allow policyholders in communities with higher regulatory standards for substantial damage criteria to qualify for ICC coverage when faced with bringing their structures into compliance. This was a problem for some Indiana properties in 2003. The “substantial damage” threshold in some of the Indiana communities that experienced floods in 2003 was 40%. There were homes that did not qualify for ICC benefits, yet those same homes were required to be brought into compliance as they were “substantially damaged” as defined by the community’s floodplain ordinance. The Reform Act will correct that problem. ≈

GUIDANCE ON LOMAs and LOMR-Fs

National Flood Insurance Program (NFIP) regulations require flood insurance for all structures located in a 100-year floodplain [also known as a Special Flood Hazard Area (SFHA)], the areas subject to inundation by the 100-year (base or 1-percent-annual-chance) flood, that carry a mortgage loan backed by a federally regulated lender or servicer.

If you believe your property is not located in SFHA, as shown on your community’s Flood Insurance Rate Map (FIRM), and would like the Federal Emergency Management Agency (FEMA) to make an official determination regarding the location of your property relative to the SFHA, you may request a Letter of Map Amendment (LOMA) or a Letter of Map Revision Based on Fill (LOMR-F).

For a **LOMA** to be issued to remove the structure from the SFHA, NFIP regulations require that the lowest adjacent grade (the lowest ground touching the structure) be at or above the Base Flood Elevation (BFE). To remove the entire lot, the lowest point on the lot must be at or above the BFE.

A **LOMR-F** is submitted for properties on which fill has been placed to raise the structure or lot to or above the BFE. NFIP regulations require that the lowest adjacent grade of the structure be at or above the BFE for a LOMR-F to be issued to remove the structure from the SFHA. The participating community must also determine that the land and any existing or proposed structures to be removed from the SFHA are “reasonably safe from flooding.” To remove the entire lot and structure, both the lowest point on the lot and the lowest adjacent grade of the structure must be at or above the BFE.

The issuance of a LOMA or LOMR-F eliminates the Federal flood insurance purchase requirement as a condition of Federal or federally backed financing. However, the mortgage lender retains the prerogative to require flood insurance as a

condition of any loan as part of their standard business practices, regardless of the location of the structure. Certain sections of the LOMA/LOMR-F application forms must be certified by a registered professional engineer or licensed land surveyor. Therefore, requestors may incur certain fees associated with obtaining data and hiring a registered professional engineer or licensed land surveyor to provide and certify certain information that must be submitted with all LOMA and LOMR-F requests. Information about the required supporting data and FEMA review fees (only for LOMR-Fs) is provided in the MT-EZ and MT-1 forms packages.

FEMA offers an online tutorial designed to walk you through the application and information-gathering processes you must follow to request single-lot LOMAs and LOMR-Fs. You can go to the FEMA Web site, www.fema.gov (http://www.fema.gov/fhm/ot_lmreq.shtm) to utilize the tutorial. Please note that you must have the latest version of the Flash Player installed on your computer, as well as some minimum specifications in order to optimally run the movie(s).

If your house was built on natural ground and its lowest adjacent grade is at or above the BFE, and you would like to request a LOMA, you can go to the LOMA Tutorial. If your house was built on fill (or has been elevated by the placement of earthen fill), and you would like to request a LOMR-F, you will need to go to the LOMR-F Tutorial. Fill is defined as “material from any source placed to raise the ground to or above the BFE.” The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade or ground) elevation, which is at or above the BFE. Fill that is placed before the date of the first NFIP map showing the area in a SFHA is considered natural grade.

The tutorial series also provides you with an online tool to complete portions of the MT-EZ (used for single lot LOMAs) and MT-1 (used for LOMR-

Fs) forms, which you may then print and mail to FEMA with all required supporting data, signatures, and FEMA review fees (only for LOMR-Fs), as appropriate. Copies of the MT-EZ and MT-1 forms can be downloaded from the FEMA Web site, in the Forms section. A toll-free number has been established by FEMA to respond to questions regarding LOMAs and LOMR-Fs: 1-877-FEMA MAP (1-877-336-2627). ☞

NEW “IDNR FLOODPLAIN UPDATES” E-MAIL FOR FLOODPLAIN ADMINISTRATORS

In an effort to help get “the word” out on important floodplain management issues, the Division of Water’s Floodplain Management Section is setting up an e-mail address list of floodplain administrators. The goal is to effectively dispense timely information on such things as floodplain updates, workshops, seminars, and other training opportunities by e-mail. In addition, the Floodplain Management Section hopes to use e-mail to solicit feedback from local floodplain administrators on various floodplain topics.

If you would like to receive information from the Floodplain Management Section in this manner, please send your current email address to gmain@dnr.IN.gov. ☞

PRECIPITATION REPORT FOR JANUARY THROUGH JUNE 2004

Extensive flooding and bitter cold weather highlighted the month of January for much of Indiana. Rainfall and snowfall amounts were generally above normal. Portions of southern Indiana had the highest floodwaters since May 1996. Riverine flooding along the East Fork White and Muscatatuck rivers in Bartholomew, Jackson and northern Washington counties was the highest since May 1996. However, areas across northern Indiana were drier than normal in January.

The snow and ice that accumulated during the last week of January slowly began to melt in early

February. Overall the month was fairly uneventful. February was characterized by mostly below normal precipitation, with only meager precipitation occurring during the first half of the month. For the Indianapolis area, it was the ninth driest February since weather records began.

March saw a transition toward a progressive, more spring-like pattern. March weather seemed to have it all—wind, frequent rains, snow, hail and some lowland flooding. Lowland flooding occurred along portions of the Wabash River from just south of Lafayette to Vincennes. There was also minor flooding along the Kankakee River, the St. Joseph River, and the Maumee River.



April had a dry start. Very little significant rain was reported during the month and generally rainfall was well below normal. While most of the State did not receive snow during April, portions of southern Indiana received one to nearly two inches of snow in mid-April. By the end of the month, much of Indiana was dry to very dry and in need of rain.

Change came quickly in May. This month proved to be a very wet and stormy month. Lowland flooding quickly returned to areas of central and southern Indiana, following rains at the end of the

month. The worst flooding occurred in Salem and Fredericksburg in Washington County. At the same time, the May 29 tornado outbreak had the third largest number of tornadoes for the state. Beginning the week of the 23rd, nearly daily storms preceded the May 29 outbreak.

Flooding reminiscent of July 2003 occurred in portions of northern and western Indiana during the month of June. Several rounds of showers and thunderstorms in mid-June caused widespread flooding in central and southern Indiana. The heaviest rain fell in Benton, Warren, and Tippecanoe counties. Flooding closed many roads and affected some residential areas. There was extensive flooding along the Wabash River from Lafayette to Vincennes. The White River and the East Fork White River also flooded due to the heavy rains during that time. Flooding reached the moderate level along the Eel, Maumee, and St. Marys rivers.

At the end of June, the weather calmed. Small streams returned to near normal, but above normal levels continued in the Wabash, White, and East Fork White rivers as a result of the heavy rain during the middle of June. ☁

	<div>  <div>KEY:</div> <div> <div>ACTUAL (INCHES)</div> <div>NORMAL (INCHES)</div> </div> </div>		<div>  </div>				
	January	February	March	April	May	June	Totals
Airport Locations							
CHICAGO	0.91	0.71	2.68	0.74	7.22	2.82	15.08
IL	1.75	1.63	2.65	3.68	3.38	3.63	16.72
SOUTH BEND	1.56	0.76	3.37	0.83	5.67	5.09	17.28
IN	2.27	1.98	2.89	3.62	3.50	4.19	18.45
FORT WAYNE	2.43	0.54	2.79	1.15	6.71	5.30	18.92
IN	2.01	1.94	2.86	3.54	3.75	4.04	18.14
INDIANAPOLIS	4.65	0.77	4.33	1.54	8.55	4.44	24.28
IN	2.48	2.41	3.44	3.61	4.36	4.13	20.43
EVANSVILLE	2.95	0.59	2.17	1.91	9.31	1.66	18.59
IN	2.91	3.10	4.29	4.48	5.01	4.10	23.89
LOUISVILLE	4.74	1.81	4.80	5.49	10.66	3.75	31.25
KY	3.28	3.25	4.41	3.91	4.88	3.76	23.49
CINCINNATI	4.55	1.25	2.97	4.50	6.85	2.93	23.05
OH	2.92	2.75	3.90	3.96	4.59	4.42	22.54

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Editor - Anita Nance

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